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[English Text]

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Continued on Last Page

[English Text]

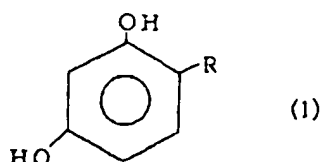
[Results] The result is one of excellent application for relief of a burning feeling or a smarting feeling along with the prevention of the darkening of the skin.

/2

[Claims]

[Claim 1] General Formula (1)

[Chemical [Structure] 1]



A cosmetic that is characterized as having a resorcinol derivative (A) represented by [the formula above] (In the formula, R represents a straight or branched alkyl group of a 2-12 carbon number.) and an infrared ray protectant (B) as the essential structural components and having a 0.01-10 weight% of (A) and a 0.1-30 weight% of (B) for the cosmetic compound total weight.

[Claim 2] A cosmetic of Claim 1 being characterized with the employment of an anti-inflammatory agent.

[Detailed Explanation of the Invention]

[0001]

[Industrial Field of Application] This invention pertaining to a cosmetic and it especially pertains to a cosmetic which relieves burning sensations and smarting sensations of the skin along with the prevention of darkening of the skin by sunlight.

[0002]

[Prior Art] The said type of resorcinol derivation has interference action of the tyrosinase activity which participates in the synthesis of melanin and skin lighteners containing this are known (Patent Number Hei 2-49715). Also, ones such as thin layer metal oxides and metal powders as cosmetics which have infrared ray protectants of glass powder, gold powder, silver powder, or aluminum powder, for example, in cosmetics which protect by the hinderance of such things as wrinkling due to things like aging and drying by sunlight (Patent Number Sho 62-149613), alumininum powder and/or stainless steel powder is jointly used with fine particulate powders of maximum grains of  $0.1\ \mu$  and less and at average particle diameters of  $0.01\sim 0.07\mu$ ; [this] is an effective cosmetic for the heat sensations of such things as a burning sensation or smarting sensation of the skin which obtains a cooling effect based on the ultraviolet ray cutting effects and infrared ray cutting effects, an acne control strength effect (Patent Number Sho 63-27421); and, cosmetics using a powder material which is treated by coating the

surface with other inorganic powders (such as mica or talc) (Patent Number Hei 2-34589) are known.

[0003]

[Problems To Be Solved By The Invention] The resorcinol derivatives pertaining to the aforementioned skin lighteners of the previous have the prevention of tyrosinase activity which is thought to employ catalysts of the synthesis phases of dopa, dopaquinone and indol-5,6-quinone which are intermediates of melanin synthesis and obtains a skin lightening effect, but there is no relief effect for the burning sensations and smarting sensations. Further, there is an infrared ray protectant effect by the cosmetic which combines such things as an infrared ray protectant formed from the aforementioned inorganic or metal powder and there is not a heating sensation such as the burning sensation or smarting sensation or the protection with hindrances of ones such as wrinkling as the aging and drying due to sunlight; and, a cooling effect is obtained, but there not being a darkening prevention effect for the skin with all of these is a problem.

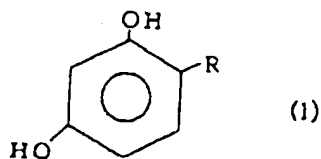
[0004]

[Means for Solving the Problems] The effects of the various research that should develop a cosmetic which relieves the burning sensation and smarting sensation of the skin and obtains the prevention of the darkening due to sunlight by these inventors realizes the obtainment of a cosmetic including the characteristic proportions of the infrared ray protectant and the characteristic resorcinol for attaining the objective is realized by this

invention. Also, this invention is Formula (1)

[0005]

[Chemical [Structure] 2]



[0006] [This pertains to] a cosmetic that is characterized by having a resorcinol derivative (A) represented by [Formula 1] (In the formula, R represents a straight chain or branched alkyl group of a carbon number 2~12) and an infrared ray protectant (B) as the essential structural components and by having 0.01~10 weight% of (A) and 0.1~30 weight% of (B) for the cosmetic compound total weight and, further, pertaining to a cosmetic that is characterized through the employment of an anti-inflammatory agent. R of the resorcinol derivative represented by the previous general formula (1) is a straight chain or branched alkyl group of carbon number 2~12 including ones such as ethyl groups, propyl groups, butyl groups, pentyl groups, hexyl groups, heptyl groups, octyl groups, nonyl groups, decyl groups, undecyl groups and dodecyl groups as straight chain alkyl groups. Also, there are ones having one hydrogen atom substituted for a low grade alkyl groups such methyl groups for branched alkyl groups and can include ones such as isopropyl groups, isobutyl groups, isoamyl groups and 2-methylhexyl groups as concrete examples.

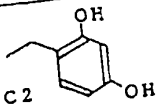
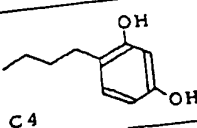
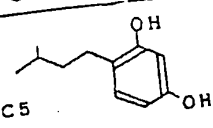
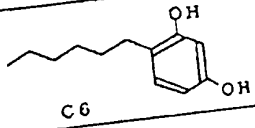
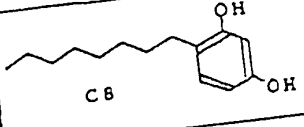
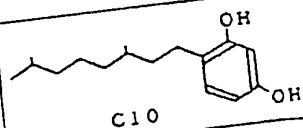
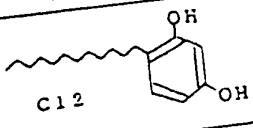
[0007] Concrete examples of resorcinol derivatives of this

invention are represented through Table 1.

[0008]

[Table 1]

/3

NUMBER 番号	3 CHEMICAL STRUCTURE 化学構造式
No. 1	
No. 2	
No. 3	
No. 4	
No. 5	
No. 6	
No. 7	

[0009] The resorcinol derivatives represented by General Formula 1 are well known compounds; the easy obtainment is possible by ones such as methods (British Patent Number 1, 581, 428) which obtain

reactions under high temperatures of 200~400°C using alumina catalysts with alkyl alcohols related to resorcinol or by methods (Lille. J. Bitter, LA. Peiner. B, Tr. Nauch-Tealed. Inst. slauitaev 1969, No 18, 127) which reduce the condensation product by zinc amalgam/hydrogen chloride after resorcinol and, for example, aliphatic carboxylic acid are condensed in the presence of zinc chloride. The mixture proportions of the resorcinol derivative represented by General Formula (1) is 0.01~10.0 weight% for the cosmetic compound total weight, and 0.1~5 weight% is particularly desirable. The darkening prevention effect for the skin becomes weak at concentrations lower than 0.01 weight% and the objective of this invention is not obtained. On the other hand, the stability is not desirable for concentrations higher than 10.0 weight%.

[0010] The effect is strong which does such things as scattering and reflecting the infrared rays for the infrared protectant used by this invention. For example, ones can be used such as aluminum powder (Patent Number Sho 62-149613 and Patent Number Sho 63-27421, etc.) and Arupe-suto (brand name, Tooyoo Aluminum (K.K.) product, Patent Number Sho 63-27421) which has an aluminum powder surface treated with fatty acid. Further, the use of fine particulate heat ray cut glass powder and fine particulate luster-glass powder is also possible. Ones can be used such as, for example, fine powder which is further cut of this and commercial Sutaaraitoguritta (brand name, Medoburukku Company product) as the powder which is finely cut with polyester resin film and acrylic resin film, fine powder which is further cut of this (called alumina vapor

deposition resin powder, below) and commercial DC Guritta (brand name, Daiyademuko Company product), for example, since there is coating by epoxy resin and cutting after vacuum deposition of metal such as aluminum on the polyester resin film. The infrared protectant of these is 0.1~30.0 weight% for the total weight of the cosmetic compound and 0.5~20 weight% is desirable. The effects are weak for relieving the burning sensations and the smarting sensations which is the objective of this invention for concentrations lower than 0.1 weight% and the infrared protectant effects has little increased function when increasing the concentration higher than 30.0 weight%.

[0011] The use of ones that are refined or that are commercially acceptable as the anti-inflammatory agents used by this invention is possible; this can include, for example, glycyrrhizic acid or its derivatives, glycyrrhetinic acid or its derivatives, bisabolol, *Geranium thunbergii* extract, maronie[?] extract, aloe extract, or peach pit extract. There are desired to be used at 0.01~5 weight% for the cosmetic total. Further, various components which are commonly used in cosmetics can be mixed with the cosmetic of this invention. The cosmetic of this invention is a make-up product such as a lipstick, foundation, eye shadow or powder class, and a foundational cosmetic of ones such as creams, milky lotion, face lotion and pack ones. Ones including combinations of 1 type or 2 or more types of ones such as the hydrocarbon classes, other types of ester classes, rou[?] classes, fats and oils classes, high grade fatty acid classes, high grade alcohol classes, water soluble



polymer compounds, powders, surfactant and polyhydric alcohol classes can be the foundation of the cosmetic. Further, the added components can include ones such as perfumes, pigments, preservatives, antioxidants, ultraviolet ray absorbants, ultraviolet reflecting agents, humectants, binders, pH regulators, chelating agents, and other various pharmaceutical components, for example, skin lightening components other than resorcinol derivatives, cell activation components, smoothers and wound treatment components, skin absorbant and antiperspirant components, vitamin classes, amino acids, nucleic acids and hormones. The suitable mixing by combining 1 type or 2 or more types of these is possible.

[0012] The aforementioned antioxidants used in this invention can include ones such as tocopherol and its derivatives, dibutylhydroxytoluene and rosemary extract; the aforementioned ultraviolet ray absorbants can include ones such as isoferulic acid and its salts, oxybenzone and its derivatives, p-aminobenzoic acid and its derivatives and cinnamic acid and its derivatives; the aforementioned ultraviolet ray reflecting agents can include ones such as titanium oxide, titanium mica and zinc oxide; the aforementioned humectants can include ones such as isoprene glycol, mucopolysaccharides such as hyaluronic acid and sodium chondroitinic sulfate, collagen hydrolase, elastin hydrolase, keratin hydrolase, soybean phospholipids, egg yolk lecithin, sodium casein,

sphingo-glycolipids, sterol glycosides, mucin, chitin and chitosan[?] and their derivatives, herbaceous [white-flowered] peony extract and seaweed extract; the aforementioned binders can include carboxyvinyl polymers, carboxymethyl cellulose and its salts, rabbinate, pentonite[?], natural rubbers (such as xanthane gum, guar gum and quince seed) and sodium alginic acid; the aforementioned skin lightening components other than resorcinol can include L-ascorbic acid-phosphoric acid ester magnesium salts, ascorbic acid glycosides, pantetheine-S-sulfonic acid and its salts, arbutin, kojic acid, natural drug classes (mulberry bark extract [liquid], gold extract and fat soluble licorice extract), royal jelly, glutathione and its derivatives and pantetheine; the aforementioned cell activation components can include ones such as protein extracted bovine blood extract (for example, Esua-ru 71 (Bodoga- product)), bovine spleen extracts, water soluble pleural extract [liquid], germinal membrane hydrolates, microbiological derived nucleic acid related extracts, chicken comb oxygen decomposition aqueous extracts (for example, Febura N (Sansei Pharmaceutical product) []); the aforementioned smoothers and wound treatment components can include ones such as  $\gamma$ -orizanol, placenta extracts (water soluble placenta extracts), angelica extract, [Japan] cypress mercaptan, lysollic[?] acid triglyceride; the aforementioned absorbing and antiperspirant components can include ones such as alantin[?] and its derivatives and aluminum chloride; the aforementioned vitamins can include ones such as vitamin A, vitamin B2 and B6, vitamin E, vitamin F and the various related

ones; the aforementioned amino acids can include ones such as serine, glycine, hydroxyproline and alanine.

[0013]

[Utilization] Resorcinol derivatives (A) have the effect of the prevention of darkening of the skin and have a skin lightening effect; the infrared ray protectants (B) have the effect of relieving the burning sensations and the smarting sensation of the skin and the skin can be protected from sunlight by the compound effect of those.

[0014]

[Actual Examples] Below, this invention is concretely explained by actual examples but is not limited to those actual examples. Further, the mixed amounts are in weight parts.

[0015] (Skin Lightening Effect) Resorcinol derivatives which are represented by General Formula (1) are explained by the actual examples of the interference with the tyrosinase activity which is affiliated with melanin synthesis. Tyrosinase is a copper containing enzyme which controls melanin synthesis with tyrosine as the initial matter. This enzyme is considered to function as a catalyst of the synthesis phases of dopa, dopa-quinone and indol-5, 6-quinone which are intermediates of melanin synthesis. Among these, the inventors investigated the activity for the former two of tyrosinase activity hinderance by the determination of the activity which the resorcinol derivatives represented by General Formula (1) control of the production reactions of dopa (tyrosine hydroxylase) from tyrosine and dopa-quinone (dopa oxidase) from

dopa.

[0016] Investigation Methods

1) Determination of Tyrosine Hydroxylation Activity

3 ml of the matter (L-tyrosine,  $1 \times 10^{-4}$  M) was put into a absorptiometer cell and was mixed well after adding 30  $\mu$ l of hydroquinone as the reference compound or resorcinol derivatives of a final concentration of 100-fold concentrations. 50  $\mu$ l of tyrosinase (Mushroom, 200 units, Sigma Company product) was added after confirming whether or not there was ultraviolet absorption for the substance and the given sample, and the reaction was initiated. The changes in absorbance was determined at 280 nm which had the maximum absorbance for L-dopa. The tyrosine hydroxylation activity was represented by nmol dopa/second/mg protein. The protein was measured by the Lowery method.

[0017]

[Table 2]

被検体	活性度 (2)
コントロール	1.83
No. 1	0.00
No. 2	0.00
No. 3	0.00
No. 4	0.00
No. 5	0.00
No. 7	0.33
レソルシン (4)	1.78
ハイドロキノン	0.00

[key to Table 2]

1 given sample

2 activity

3 control

4 resorcinol

hydroquinone

[0018] 2) Determination of Dopa Enzyme Activity

L-dopa ( $5 \times 10^{-3}$  M) was used as the substance and the dopa chrome produced was determined at a wavelength of 475 nm. Other than that, the methods were the same as 1) and 10 units of tyrosinase was used. The dopa enzyme activity was represented by  $\mu\text{mol dopa chrome/minute/mg protein}$ .

[0019]

[Table 3]

/5

7	
① 被検体	活性度 ②
③ コントロール	15.80
No. 1	7.44
No. 2	0.00
No. 3	0.00
No. 4	0.00
No. 5	0.00
No. 7	7.19
レゾルシン ④	16.81
ハイドロキノン	26.94

[key to Table 3]

- 1 given sample
- 2 activity
- 3 control
- 4 resorcinol  
hydroquinone

[0020] Actual Example 1 (Variable Origin Experiment)

*Salmonella typhimurium* (*Salmonella typhimurium*) was used as for the isoamyl resorcinol and there not being variable origins was confirmed by an Ames (Ames) test.

[0021] Actual Example 2 (Acute Toxicity)

Resorcinol derivatives or hydroquinone as the reference compound were dissolved in physiological saline and this was dosed orally (p.o.), within the peritoneum (i.p.) or subcutaneously (s.c.) to 10 individuals of ddy type male mice as each group, then [the number] alive or dead was observed until 24 hours after dosage. The LD<sub>50</sub> was calculated by the Litchfield. Wilcoxon method based on the result. These results are shown in the following table.

[0022]

[Table 4]

化合物 ①	* L D <sub>50</sub> (mg/kg)		
	i.p.	s.c.	p.o.
No. 4	334.8	> 500	> 500
No. 3 ②	266.8	> 500	> 500
ハイドロキノン	144.0	338.8	489.0

[key to Table 4]

1 compound

2 hydroquinone

[0023] Actual Examples 1, 2 and Reference Example 1, 2, 3

Cake-type Foundation [Makeup]

(Treatment)

[0024]

[Table 5]

※

原料名 ①		実施例②		比較例③		
		1	2	1	2	3
A	微粒子酸化チタン(平均粒径30 $\mu$ )	5.0	5.0	5.0	5.0	5.0
	カオリン	22.0	22.0	22.0	22.0	22.0
	タルク	42.3	41.3	45.3	52.3	55.3
	ベンガラ	0.4	0.4	0.4	0.4	0.4
	黄酸化鉄	0.5	0.5	0.5	0.5	0.5
	黒酸化鉄	0.1	0.1	0.1	0.1	0.1
	アルベースト P1100	10.0	10.0	10.0		
B	プロピレングリコール	3.0	3.0	3.0	3.0	3.0
C	セスキオレイン酸ソルビタン	3.5	3.5	3.5	3.5	3.5
	オリーブ油	10.0	10.0	10.0	10.0	10.0
	レゾルシノール誘導体 No. 3	3.0	3.0		3.0	
	パラオキシ安息香酸メチル	0.1	0.1	0.1	0.1	0.1
	香料	0.1	0.1	0.1	0.1	0.1
	ビスボロール		1.0			

[Key to Table 5]

1 raw material name

2 actual examples

- 3 reference examples
- A fine powder titanium oxide (average particle diameter 30  $\mu$ )
- kaolin
- talc
- iron oxide red
- yellow iron oxide
- black iron oxide
- Arupe-suto P1100 [brand name]
- B propylene glycol
- C sorbitan sesquioleate
- olive oil
- resorcinol derivative No. 3
- methyl para-oxybenzoate
- perfumes
- bisabolol

[0025] (Manufacturing Method)

[Group A] is combined and ground using a grinder. This is transferred to a high speed blender, [group] B is added and this is blended.

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[Group] C is added to this and [this] is uniformly blended. This is precessed by a grinder, passed through a filter and a powder is obtained which is then press-fitted into a vessel such as a metal bowl.

Functional Evaluation

(Heat Sensations Such as Burning



## Sensations and Smarting Sensations

### <Test Methods and Results>

(Samples) Cake-type Foundations of Actual Examples 1, 2 and Reference Examples 1, 2, 3

(Test Methods) A male panel of 75 individuals was divided into 5 groups of 15 individuals each and were exposed to the sunlight for 4 hours from 10 [hundred] hours to 14 [hundred] hours after the aforementioned respective samples were coated onto the faces and the back from the shoulders of the respective groups.

(Evaluation) Evaluations were given concerning the burning sensation and the smarting sensation after 20 hours.

[0026] (Results)

[0027]

[Table 6]

評価項目①	② 実施例1	② 実施例2	③ 比較例1	③ 比較例2	③ 比較例3
ほてり感が強く苦痛	4人	3	7	10	11
ほてり感がある④	8⑥	7	6	3	2
ほてり感が気にならない	3	5	3	2	2
ヒリヒリ感が強く苦痛	3人	2	5	8	10
ヒリヒリ感がある⑤	8⑥	9	8	5	3
ヒリヒリ感が気にならない	4	4	2	2	2

[Key to Table 6]

- 1 evaluated items
- 2 actual example
- 3 reference example
- 4 burning sensation with great suffering

- burning sensation present
- burning sensation not perceived
- 5 smarting sensation with great suffering
- smarting sensation present
- smarting sensation not perceived
- 6 people

[0028] The joint use of the infrared protectants and the resorcinol derivatives in this invention is understood to relieve the burning sensations and the smarting sensation better when compared with increasing amounts in talc of the same amount of coating for both items [individually] of the infrared ray protectants and the resorcinol derivatives of the reference control in the manner clarified from the results of Table 6. Further, the evaluation is said to be well introduced for the skin when this invention product is applied well.

[0029] Actual Example 3 and Reference Examples 4, 5, 6  
Face Powder

(Treatment)

[0030]

[Table 7]

②

原料名 ①	実施例	比較例 ③			
	3	4	5	6	
脂肪酸処理微粒子酸化チタン (平均粒径40 $\mu$ )	5	5	5	5	
タルク	55.7	56.2	56.7	57.2	
セリサイト	2.5	2.5	2.5	2.5	
A 炭酸マグネシウム	3	3	3	3	
カオリン	5	5	5	5	
シルクパウダー	2	2	2	2	
ベンガラ	0.1	0.1	0.1	0.1	
黄酸化鉄	0.3	0.3	0.3	0.3	
グンジョウ	0.1	0.1	0.1	0.1	
アルベースト P1100	1.0	1.0			
バラオキシ安息香酸メチル	0.2	0.2	0.2	0.2	
B オリーブ油	2	2	2	2	
レゾルシノール誘導体 No.3	0.5		0.5		
香料	0.1	0.1	0.1	0.1	

[Key to Table 7]

- 1 raw material name
- 2 actual example
- 3 reference examples
- A fatty acid processed fine powder titanium oxide  
(average particle diameter 40  $\mu$ )
- talc
- salicide
- magnesium carbonate
- kaolin
- silk powder

iron oxide red

yellow iron oxide

ultramarine

Arupe-suto P1100 [brand name]

B methyl para-oxybenzoate

olive oil

resorcinol derivative No. 3

perfume

[0031] (Manufacturing Method) [Group A] was prepared in a Henshel mixer then stirred and blended for 5 minutes. Then, [these] were removed and

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composite ground by a grinder. Then, this was transferred to a Henshel mixer, [group] B was added and [this] was stirred and mixed for 5 minutes then removed and vessels were filled with [this] after the matter was uniform.

[0032] Infrared Ray Penetrating Light Test

<Test Method and Results>

(Samples) The sample was as 1 g of Actual Example 3 (or Reference Example 4, 5, 6) and 1 g of castor oil were treated 100 times by fubamara[?] and this was transferred onto a glass plate then spread to a uniform thickness of 0.5 millimeters by a dokutobure-do[?] and dried for 3 hours.

(Test Method) This sample underwent infrared ray irradiation for 5 minutes under an infrared lamp (400 W) and the infrared ray

amount which penetrated was determined by infrared multiple area calculation illumination meter[?] (Suga Shikenki (K.K.) product) and was compared by relative strengths with the blank as 100.

[0033] (Results)

[0034]

[Table 8]

検 体 ①		相 対 強 度 ②
③	ブランク (ガラス板 + ひまし油)	1 0 0
④	フェイスパウダー 実施例 3 ⑤	8 0
	比較例 4 ⑥	8 8
	比較例 5 ⑥	8 5
	比較例 6 ⑥	9 1

[Key to Table 8]

- 1 sample
- 2 relative strength
- 3 blank (glass plate + castor oil)
- 4 face powder
- 5 actual example
- 6 reference example

[0035] The joint use of the infrared protectants and the resorcinol derivatives in this invention is understood to have little infrared ray penetration when compared with increasing amounts in talc of the same amount of coating for both items [individually] of the infrared ray protectants and the resorcinol derivatives of the reference control in the manner clarified from

the results of Table 8.

[0036]      Actual Example 4      Cream

(Treatment)

[0037]

[Table 9]

A	ワセリン	5 . 0
	流動パラフィン	1 5 . 0
	セタノール	5 . 0
	自己乳化型モノステアリン酸グリセリン	2 . 0
	ポリオキシエチレンソルビタン モノステアリン酸エステル (20E.O.)	2 . 0
	パラオキシ安息香酸ブチル	0 . 2
	グリチルレチン酸ステアリル	0 . 2
	アルミ蒸着樹脂末	0 . 5
	レゾルシノール誘導体 No. 3	0 . 1
	1, 3 - ブチレングリコール	1 0 . 0
B	エデト酸 2 ナトリウム	0 . 1
	精製水	5 6 . 4
	胎盤エキス	3 . 0
	L - アスコルビン酸リン酸エステル マグネシウム塩	1 . 0
C	香料	0 . 1

[Key to Table 9]

A      vaseline

fluid paraffin

cetanol[?]

free emulsion-type glycerin monostearate

polyoxyethylene sorbitan monostearate ester (20 E. O.)

butyl para-oxybenzoate

stearyl glycyrrhetinic acid

alumina vapor deposition resin powder

B resorcinol derivative No. 3

1, 3-butylene glycol

2 sodium edetate[?]

pure water

placenta extract

L-ascorbic acid-phosphoric acid magnesium salt

C perfume

[0038] (Manufacturing Method)

There is uniform dissolving while respectively stirring [groups] A and B at 70°C. [Group] B is gradually added to [group] B while stirring. Then, [this] is uniformly emulsified by an homogenizer and cooled to 40°C at which [group] C is added and then cooled to 30°C.

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[0039] Actual Example 5 Powder Makeup

(Treatment)

[0040]

[Table 10]

A	タルク	46.9
	ベンガラ	0.05
	カオリン	12.0
	沈降性炭酸カルシウム	4.0
B	酸化亜鉛	8.0
	ステアリン酸マグネシウム	4.0
	微粒子ラスターガラス末	20.0
	レゾルシノール誘導体 No.2	5.0
C	香料	0.05

[Key to Table 10]

A talc

iron oxide red

B kaolin

precipitated calcium carbonate

zinc oxide

magnesium stearate

fine powder raster-glass powder

resorcinol derivative No. 2

C perfume

[0041] (Manufacturing Method) [Group] A was blended in a blender. B was added to this and well blended then C was atomized and uniformly blended. This was the product after grinding and passing through a filter.

[0042] Actual Examples 6, 7, 8, 9, 10 Skin Lightening Milky Lotion



[0043]

[Table 11]

原料名 (1)	実施例 (2)				
	6	7	8	9	10
A スクワレン オリーブ油 セタノール 酢酸dl- $\alpha$ -トコフェロール モノステアリン酸グリセリン ポリオキシエチレン硬化ヒマシ油(60E.O.) アルペスト P1100 グリチルレチン酸ステアリル	5.0	5.0	5.0	5.0	5.0
	5.0	5.0	5.0	5.0	5.0
	1.0	1.0	1.0	1.0	1.0
	0.01	0.01	0.01	0.01	0.01
	0.5	0.5	0.5	0.5	0.5
	1.0	1.0	1.0	1.0	1.0
	0.15	0.15	0.15	0.15	0.15
	0.1	0.1	0.1	0.1	0.1
B カルボキシビニルポリマー 水酸化カリウム 精製水	0.2	0.2	0.2	0.2	0.2
	0.1	0.1	0.1	0.1	0.1
	20.0	20.0	20.0	20.0	20.0
C 1, 3-ブチレングリコール クエン酸 クエン酸ナトリウム 精製水 レゾルシノール誘導体No. 3	8.0	8.0	8.0	8.0	8.0
	0.01	0.01	0.01	0.01	0.01
	0.1	0.1	0.1	0.1	0.1
	57.52	57.52	57.52	57.52	57.52
	0.2	0.2	0.2	0.2	0.2
D エスアール 71 香料 ローヤルゼリー パンテテイン-S-スルホン酸カルシウム アルブチン アスコルビン酸グルコシド オウゴンエキス ソウハクヒ抽出液	0.01	0.01	0.01	0.01	0.01
	0.1	0.1	0.1	0.1	0.1
	1.0				
		1.0			
			1.0		
				1.0	
					0.05
					0.05

[Key to Table 11]

- 1 raw material name
- 2 actual examples
- A squalene
- olive oil
- cetanol[?]
- dl- $\alpha$ -tocopherol acetate
- glycerin monostearate
- polyoxyethylene hardened castor oil (60 E.O.)

Arupe-suto P1100 [brand name]

stearyl glycyrrhetic acid

B carboxyvinyl polymer

potassium hydroxide

pure water

C 1, 3-butylene glycol

citric acid

sodium citrate

pure water

resorcinol derivative No. 3

D Esua-ru 71 [brand name]

perfume

royal jelly

calcium pantetheine-S-sulfonic acid

arbutin[?]

ascorbic acid glucoside

gold extract

mulberry bark extract [liquid]

[0044] (manufacturing Method) [Group] A is heated to 70°C and mixed and dispersed. [Group B] is uniformly dissolved and [group] C is added to this then [this] is heated to 70°C. This is gradually added to [group] A while stirring and this is uniformly emulsified. [Group] D is added after [this] is cooled to 40°C then [this] is cooled to 30°C.

[0045] Actual Example 11, 12, 13, 14, 15 Cream B

(Treatment)

[0046]

[Table 12]

原料名 (1)		実施例 (2)					
		11	12	13	14	15	16
A	ワセリン	5.0	5.0	5.0	5.0	5.0	5.0
	流動パラフィン	15.0	15.0	15.0	15.0	15.0	15.0
	セタノール	5.0	5.0	5.0	5.0	5.0	5.0
	自己乳化型モノステアリン酸グリセリン	2.0	2.0	2.0	2.0	2.0	2.0
	ポリオキシエチレンソルビタン モノステアリン酸エステル (20E.O.)	2.0	2.0	2.0	2.0	2.0	2.0
	パラオキシ安息香酸メチル	0.1	0.1	0.1	0.1	0.1	0.1
	香料	0.1	0.1	0.1	0.1	0.1	0.1
	アルベースト P1100	0.2	0.2	0.2	0.2	0.2	0.2
B	レゾルシノール誘導体 No. 3	0.5	0.5	0.5	0.5	0.5	0.5
	イソプレングリコール	9.5	9.5	9.5	9.5	9.5	9.5
	エデト酸 2ナトリウム	0.1	0.1	0.1	0.1	0.1	0.1
	精製水	50.0	50.0	50.0	50.0	50.0	50.0
	ヒアルロン酸ナトリウム	0.1	0.1	0.1	0.1	0.1	0.1
	マロニエエキス	0.1	0.1	0.1	0.1	0.1	0.1
C	コラーゲン加水分解物	0.3					
	スフィンゴ糖脂質		0.1				
	ステロール配糖体		0.2				
	水溶性胸腺エキス			0.3			
	ムチン				0.3		
	アラントイン					0.3	
	ビタミンA						0.1
	セリン						0.2
	精製水	10.0	10.0	10.0	10.0	10.0	10.0

[Key to Table 12]

1 raw material

2 actual examples

A vaseline

fluid paraffin

cetanol[?]

free emulsion-type glycerin monostearate

polyoxyethylene sorbitan

monostearate ester (20 E.O.)

methyl para-oxybenzoate

perfume

Arupe-suto P1100 [brand name]

B resorcinol derivative No. 3

isoprene glycol

2 sodium edetoate[?]

pure water

sodium hyaluronic acid

maronie[?] extract

C collagen hydrolase

sphingo-mucopolysaccharides

sterol glycosides

water soluble pleural extract

mucin

alantini[?]

vitamin A

serine

pure water

[0047] (Manufacturing Method) [Groups] A and B were respectively heated to 70°C and uniformly dissolved (dispersed) while stirring. [Group] B was gradually added to [group] A while stirring and [this] was uniformly emulsified by a homogenizer. [Group] C was added after dissolving and after [A and B] were cooled to 40°C, then [this] was cooled to 30°C.

[0048]

[Effects of This Invention] A cosmetic which combines a resorcinol derivative (A) at 0.01-10 weight% and an infrared protectant (B) at 0.1-30 weight% and prevents the penetration of sunlight and which hinders tyrosinase activity along with the prevention of darkening of the skin by the previous [tyrosinase] not being obtained and, further, is a cosmetic which is highly effect for relieving burning sensations and smarting sensations.

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#### ABSTRACT:

PURPOSE: To obtain a cosmetic, containing a specific resorcinol derivative and an infrared ray protectant in a specified proportion, excellent in prevention of blackening of skin with sunlight and relieving burning or smarting feeling of the skin.

CONSTITUTION: A cosmetic containing 0.01-10wt.% resorcinol derivative (e.g. resorcinol derivatives expressed by formulas II, III, IV) expressed by formula I (R is 2-12C straight-chain or branched alkyl) and 0.1-30wt.% infrared ray protectant (e.g. aluminum powder, the aluminum powder having the surface treated with a fatty acid, fine particulate heat ray-cutting glass powder or fine particulate luster glass powder). About 0.01-5wt.% anti-inflammatory agent such as glycyrrhetic acids, glycyrrhizic acids or bisabolol is preferably further used together in the aforementioned cosmetic, which is used as a cosmetic such as cream, milky lotion, toilet

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water, pack, lipstick, foundation, eye shadow or face powder.